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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,518	11/21/2003	Talguk Kim	9281-4708	3357

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EXAMINER	
ALAM, FAYYAZ	
ART UNIT	PAPER NUMBER
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/22/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/719,518	KIM ET AL.	
	Examiner	Art Unit	
	Fayyaz Alam	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/21/2003, 10/30/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement submitted on 11/21/2003 and 10/30/2006 been considered by the Examiner and made of record in the application file.

Specification

Claims 2 and 5 are objected to because of the following informalities: In **claim 2**, line 9, add the word "first" before the word "information". In **claim 5**, lines 13 and 14 must be appropriately indented. In **claim 9**, line 9 must be appropriately indented. Appropriate correction is required.

The disclosure is objected to because of the following informalities: On **pg. 15, line 7**, replace "module" with "apparatus".

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A "program" is disclosed in the said dependent claim. Nevertheless, prior art will be applied.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 6, 11, 16, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to the above addressed claims, which essentially claim same or similar limitations, it is unclear to the examiner as to the use of the phrase, "radio transmission link is connected from the first information communication apparatus". In particular, the use of the word "from". According to the examiner and one of ordinary skill in the art, when there exist a radio communication link, it is a two-way link, and therefore, a connection is established to and from one communication device to the other simultaneously. It is unclear as to how a communication link can be from one device to the other when devices are in two-way communication. Appropriate prior art will be applied according to the best of examiner's understanding.

Claim 13 recites the limitation "program" in line 1. There is insufficient antecedent basis for this limitation in the claim. The independent claim 10 recites a "means for".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 - 22 are rejected under 35 U.S.C. 102(e) as being anticipated by **Sanjeev et al. (U.S. Application # 2003/0078002).**

Consider **claim 1**, Sanjeev et al. disclose a wireless link reestablishment method (read as connection link restoration) between a remote device (302) (read as first information communication apparatus) and a client device (304) (read as second communication apparatus), the remote device (302) comprising a transceiver (303) (read as communications module) and a processor (305) (read as host computer), the transceiver (303) performing the method which comprises:

remote device (302) (read as first communication apparatus) and the client device (304) (read as second communication apparatus) are coupled via wireless link (316) (read as communicating through radio transmission link) (see [0022; 0032]; fig. 3); service level disconnect (620) indicates that wireless link (316) is terminated (read as detecting a disconnection of the radio transmission link) (see [0037]);

RFCOMM (610) determines the type of termination (622) by differentiating between a link loss termination and non-link loss termination (read as analyzing a reason for the disconnection of the radio transmission link) (see [0038]);

application (606) decides if client device (304) will attempt to reestablish wireless link (316) (read as determining whether or not to reconnect the disconnected radio transmission link) after RFCOMM determines and communicates the type of termination (622) (read as on the basis of the analysis of the disconnection reason) (see [0039]);

if client device (304) determines the type of termination (622) is a link loss termination, client device (304) attempts to reestablish wireless link (624) (generating a reconnection command signal) to remote device (302) (see fig.6; [0039]); and

if a non-link loss termination is determined, then the link is assumed to be terminated either by the remote or client device intentionally and command indicating such an event would inherently be generated (read as generating forced link disconnection command if the disconnected radio transmission link should not be reconnected) (see 0038; 0043]; fig. 7).

Consider **claim 2** as applied to claim 1, Sanjeev et al. disclose RFCOMM (610) (read as control unit) which would inherently have the knowledge of the master and slave units or remote and client devices in the given WPAN system (see fig. 1).The application (606) performs the reestablishment (read as restoration) of the wireless link (316) by generating a reestablish wireless signal (624) (read as reconnection command signal), therefore, it is inherent, one device would generate the reestablish wireless link signal (624) (read as reconnection command signal) and the other device would wait for

receiving the signal depending on the master/slave configuration within the WPAN (read as generates reconnection command signal and wait for reconnection command signal) (see [0038 - 0039]; figs. 1, 3, 6).

Consider **claim 3** as applied to claim 1, Sanjeev et al. disclose communication between remote device (302) (read as first information communication apparatus) and only one client device (304) (read as second information communication apparatus) (see fig. 3).

Consider **claim 4** as applied to claim 1, Sanjeev et al. disclose that WPAN (102) is a Bluetooth network (read as communications module is a Bluetooth module), and wherein RFCOMM (610) (read as control unit) determines the type of link termination by differentiating between link loss termination (read as disconnection due to lower layer protocol) and non-link loss termination (read as disconnection due to upper layer protocol) (see [0038]).

Consider **claim 5**, Sanjeev et al. disclose a wireless link reestablishment method (read as connection link restoration) for a remote device (302) (read as first information communication apparatus) comprising:

providing a processor (305) (read as host computer);

providing a transceiver (303) (read as communications module) in communications with host computer (see fig. 3), performing;

remote device (302) (read as first communication apparatus) communicating via wireless link (316) (read as communicating through data transmission link) (see [0022; 0032]; fig. 3); service level disconnect (620)

indicates that wireless link (316) is terminated (read as detecting a disconnection of the data transmission link) (see [0037]);

RFCOMM (610) determines the type of termination (622) by differentiating between a link loss termination and non-link loss termination (read as analyzing a reason for the disconnection of the data transmission link) (see [0038]);

application (606) decides if client device (304) will attempt to reestablish wireless link (316) (read as determining whether or not to reconnect the disconnected data transmission link) after RFCOMM determines and communicates the type of termination (622) (read as on the basis of the analysis of the disconnection reason) (see [0039]);

if client device (304) determines the type of termination (622) is a link loss termination, client device (304) attempts to reestablish wireless link (624) (generating a reconnection command signal) to remote device (302) (see fig.6; [0039]); and

if a non-link loss termination is determined, then the link is assumed to be terminated either by the remote or client device intentionally and command indicating such an event would inherently be generated (read as generating forced link disconnection command if the disconnected data transmission link should not be reconnected) (see 0038; 0043]; fig. 7).

Consider **claim 6** as applied to claim 5, Sanjeev et al. disclose RFCOMM (610) (read as control unit) which would inherently have the knowledge of the master and slave units or remote and client devices in the given WPAN system (see fig. 1).The

application (606) performs the reestablishment (read as restoration) of the wireless link (316) by generating a reestablish wireless signal (624) (read as reconnection command signal), therefore, it is inherent, one device would generate the reestablish wireless link signal (624) (read as reconnection command signal) and the other device would wait for receiving the signal depending on the master/slave configuration within the WPAN (read as generates reconnection command signal and wait for reconnection command signal) (see [0038 - 0039]; figs. 1, 3, 6).

Consider **claim 7** as applied to claim 5, Sanjeev et al. disclose communication between remote device (302) (read as first information communication apparatus) and only one client device (304) (read as second information communication apparatus) (see fig. 3).

Consider **claim 8** as applied to claim 5, Sanjeev et al. disclose communication is performed between a remote device (104) (read as first information communication apparatus) and plurality of client devices (108, 106, 110) (read as second information communication apparatus) (see fig. 1; [0017]).

Consider **claim 9**, Sanjeev et al. disclose a wireless link reestablishment method (read as connection link restoration) for a remote device (302) (read as first information communication apparatus) including a processor (305) (read as host computer) and a transceiver (303) (read as communications module) having an RFCOMM (610) (read as control unit), the transceiver (303) performing the method which comprises:

remote device (302) (read as first communication apparatus) communicating via wireless link (316) (read as communication by transferring a radio transmission link) (see [0022; 0032]; fig. 3);

service level disconnect (620) indicates that wireless link (316) is terminated (read as detecting a disconnection of the radio transmission link) (see [0037]);

RFCOMM (610) determines the type of termination (622) by differentiating between a link loss termination and non-link loss termination (read as analyzing a reason for the disconnection of the radio transmission link) (see [0038]);

application (606) decides if client device (304) will attempt to reestablish wireless link (316) (read as determining whether or not to reconnect the disconnected radio transmission link) after RFCOMM determines and communicates the type of termination (622) (read as on the basis of the analysis of the disconnection reason) (see [0039]);

if client device (304) determines the type of termination (622) is a link loss termination, client device (304) attempts to reestablish wireless link (624) (generating a reconnection command signal) to remote device (302) (see fig.6; [0039]); and

if a non-link loss termination is determined, then the link is assumed to be terminated either by the remote or client device intentionally and command indicating such an event would inherently be generated (read as generating forced link disconnection command if the disconnected radio transmission link should not be reconnected) (see 0038; 0043]; fig. 7).

Consider **claim 10**, Sanjeev et al. disclose a wireless link reestablishment (read as connection link restoration) method and therefore a wireless link reestablishments means, comprising:

remote device (302) (read as first communication apparatus) and the client device (304) (read as second communication apparatus) are coupled via wireless link (316) (read as means for performing radio communication) (see [0022; 0032]; fig. 3);

service level disconnect (620) indicates that wireless link (316) is terminated (read as means for detecting a disconnection of the radio transmission link) (see [0037]);

RFCOMM (610) determines the type of termination (622) by differentiating between a link loss termination and non-link loss termination (read as means for analyzing a reason for the disconnection of the radio transmission link) (see [0038]);

application (606) decides if client device (304) will attempt to reestablish wireless link (316) (read as means for determining whether or not to reconnect the disconnected radio transmission link) after RFCOMM determines and communicates the type of termination (622) (read as on the basis of the analysis of the disconnection reason) (see [0039]);

if client device (304) determines the type of termination (622) is a link loss termination, client device (304) attempts to reestablish wireless link (624) (read as means for generating a reconnection command signal) to remote device (302) (see fig.6; [0039]); and

if a non-link loss termination is determined, then the link is assumed to be terminated either by the remote or client device intentionally and command indicating such an event would inherently be generated (read as means for generating forced link disconnection command if the disconnected radio transmission link should not be reconnected) (see 0038; 0043]; fig. 7).

Consider **claim 11** as applied to claim 10, Sanjeev et al. disclose a remote device (302) (read as first communication apparatus) and a client device (304) (read as second communication apparatus) in communication via wireless link (316) (see [0022; 0032]; fig. 3), RFCOMM (610) (read as means for determining) which would inherently have the knowledge of the master and slave units or remote and client devices in the given WPAN system (see fig. 1).The application (606) performs the reestablishment (read as restoration) of the wireless link (316) by generating a reestablish wireless signal (624) (read as means for generating the reconnection command signal), therefore, it is inherent, one device would generate the reestablish wireless link signal (624) (read as reconnection command signal) and the other device would wait for receiving the signal depending on the master/slave configuration within the WPAN (read as generates reconnection command signal and wait for reconnection command signal) (see [0038 - 0039]; figs. 1, 3, 6).

Consider **claim 12** as applied to claim 10, Sanjeev et al. disclose communication between remote device (302) (read as first information communication apparatus) and only one client device (304) (read as second information communication apparatus) (see fig. 3).

Consider **claim 13** as applied to claim 10, Sanjeev et al. disclose a remote device (304) (read as radio communications means) that comprise a transceiver (303) (read as communication module) and that WPAN (102) is a Bluetooth network (read as communications module is a Bluetooth module), and wherein RFCOMM (610) (read as control unit) determines the type of link termination (read as means for determining) by differentiating between link loss termination (read as disconnection due to lower layer protocol) and non-link loss termination (read as disconnection due to upper layer protocol) (see [0038]).

Consider **claim 14**, Sanjeev et al. disclose a communications system (see fig. 1; 3), comprising:

remote device (302) (read as first communication apparatus) and the client device (304) (read as second communication apparatus) are coupled via wireless link (316) (read as being in communication) (see [0022; 0032]; fig. 3);

the remote device (302) (read as first information communication apparatus) having a transceiver (303) (read as communications module) interfaced with a processor (305) (read as host computer) (see fig. 3); and

the transceiver module (303) inherently having RFCOMM (610) (read as control unit) which determines a service level disconnect (620) that indicates a wireless link (316) is terminated (read as detecting a disconnection of the radio transmission link) (see [0037]) and RFCOMM (610) (read as control unit) determines the type of termination (622) by differentiating between a link loss termination and non-link loss termination between the remote and client device (304 &302) (read as determines a

reason for failure of communications between first and second information communication apparatus) (see [0038]),

wherein a service level disconnect signal (620) (read as link disconnection signals) is communicated to RFCOMM protocol and inherently not sent to the processor (read as signal not sent to the host computer when there is a failure of communications between the first and second information communication apparatus) (see [0037]; fig. 6).

Consider **claim 15** as applied to claim 14, Sanjeev et al. disclose RFCOMM (610) (read as control unit) determines whether the link termination is a link loss termination or a non-link loss termination (read as determines whether a reconnection command signal should be generated) and if link loss termination is determined, then a reestablish wireless link (624) (read as reconnection command signal) is generated (see fig. 3, 6; [0038; 0039]).

Consider **claim 16** as applied to claim 15, Sanjeev et al. disclose RFCOMM (610) protocol which would inherently have a connection restoration circuit unit since it reacts to the service level disconnect signal (620) and performs the above stated procedure and eventually receives a "reestablishment" signal (624) (read as reconnection command signal; see fig. 6) and therefore reacts to establish a link (see [0039]). The RFCOMM (610) (read as connection restoration circuit) which would inherently have the knowledge of the master and slave units or remote and client devices in the given WPAN system (see fig. 1).The application (606) performs the reestablishment (read as restoration) of the wireless link (316) by generating a reestablish wireless signal (624) (read as generating the reconnection command

signal), therefore, it is inherent, one device would generate the reestablish wireless link signal (624) (read as reconnection command signal) and the other device would wait for receiving the signal depending on the master/slave configuration within the WPAN (read as generates reconnection command signal and wait for reconnection command signal) (see [0038 - 0039]; figs. 1, 3, 6).

Consider **claim 17** as applied to claim 14, Sanjeev et al. disclose communication between remote device (302) (read as first information communication apparatus) and only one client device (304) (read as second information communication apparatus) (see fig. 3).

Consider **claim 18** as applied to claim 14, Sanjeev et al. disclose RFCOMM (610) (read as control unit) determines that link termination is a non-link loss termination (read as communication should not be reconnected) and a forced link disconnection command would inherently be sent since the connection data (318) is cleared when the link is "intentionally" (read as forced) broken (see fig. 7; [0038; 0043 - 0044]).

Consider **claim 19** as applied to claim 18, Sanjeev et al. disclose inherently a forced link disconnection signal would be sent to the processor (read as host computer), since as disclosed, the memory is cleared of the connection data (318) when the link is intentionally (read as forced) broken, and in addition, the reestablish wireless link (624) (read as reconnection command signal) is inherently sent to the RFCOMM (610) (read as restoration circuit unit) (see fig. 6, 7; [0038 - 0039; 0043 - 0044]).

Consider **claim 20**, Sanjeev et al. disclose a data communications system (see fig. 1), comprising: a remote device (302) (read as first information communication

apparatus) having a processor (305) (read as host computer) and a transceiver (303) (read as communication module), the transceiver (303) (read as communications module) having RFCOMM (610) capabilities (read as having control unit and a connection restoration circuit unit; see [0036]); and remote device (302) (read as first communication apparatus) communicating via wireless link (316) (read as communicating through data communications link) (see [0022; 0032]; fig. 3);

RFCOMM (610 (read as control unit) detects the service level disconnect (620) which indicates that wireless link (316) is terminated (read as detecting a disconnection of the data communications link) (see [0037]) and RFCOMM (610) determines (read as analyzing) the type of termination (622) by differentiating between a link loss termination and non-link loss termination (read as analyzing whether or not to reconnect data communications link) (see [0038]);

application (606) (read as control unit, since it is a protocol and must have hardware associated with it to carry out the procedure according to paragraph [0036]) decides if client device (304) will attempt to reestablish wireless link (316) (read as determining whether or not to reconnect the disconnected radio transmission link) after RFCOMM determines and communicates the type of termination (622) (read as on the basis of the analysis of the disconnection reason) (see [0039]);

if client device (304) determines the type of termination (622) is a link loss termination, client device (304) attempts to reestablish wireless link (624) (generating a reconnection command signal) to remote device (302) (see fig.6; [0039]); and

if a non-link loss termination is determined, then the link is assumed to be terminated either by the remote or client device intentionally and command indicating such an event would inherently be generated (read as generating forced link disconnection command if the disconnected radio transmission link should not be reconnected) (see 0038; 0043]; fig. 7).

Consider **claim 21** as applied to claim 20, Sanjeev et al. disclose inherently a forced link disconnection signal would be sent to the processor (read as host computer), since as disclosed, the memory is cleared of the connection data (318) when the link is intentionally (read as forced) broken. Therefore, the process of clearing the memory must be carried out by the processor (305) (read as host computer) and a signal of the said type would be sent to the processor (305) (see [0038; 0043 - 0044]; fig. 7).

Consider **claim 22** as applied to claim 20, Sanjeev et al. disclose RFCOMM (610) (read as control unit) which would inherently have the knowledge of the master and slave units or remote and client devices in the given WPAN system (see fig. 1).The application (606) performs the reestablishment (read as restoration) of the wireless link (316) by generating a reestablish wireless signal (624) (read as reconnection command signal), therefore, it is inherent, one device would generate the reestablish wireless link signal (624) (read as reconnection command signal) and the other device would wait for receiving the signal depending on the master/slave configuration within the WPAN (read as generates reconnection command signal and wait for reconnection command signal if data communications link is not connected from the first communications apparatus) (see [0038 - 0039]; figs. 1, 3, 6).

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

Commissioner for Patents
P.O. Box 1450
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Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Fayyaz Alam whose telephone number is (571) 270-1102. The Examiner can normally be reached on Monday-Friday from 9:30am to 7:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

2-19-07

Lana N. Le
Primary Examiner
Technology Center 2600

Fayyaz Alam

February 18, 2007